

GEOS-5.7.1 File Specification user feedback – questions and responses.

(NOTE: The release version will now be 5.7.2)

Updated: 06/16/2011

User: Harvard, Code 613.3 (Diehl)

Concern: DTRAIN is missing.

DTRAIN will be added to the tavg3_3d_cld_Nv product.

User: TES, CERES FLASHFlux/POWER

Concern: We use the instantaneous 2-D product in GEOS-5.2 and there is not one in the GEOS-5.7.1 file specification.

We have added inst3_2d_asm_Nx to the specification as a companion to the inst3_3d_asm_Nv and inst3_3d_asm_Np products.

User: Harvard

Question: QI & QL are no longer provided in time-averaged form. Is it valid to compute them: $QI = QILS + QIAN$; $QL = QLLS + QLAN$?

Yes, it is valid to compute this sum.

User: Harvard

Question: Is $CLOUD \sim CFAN + CFCU + CFLS$?

No. The computation of CLOUD is more complicated because CFAN is modified before being used in the sum.

User: Harvard

Question: Is TS defined at the surface or just above?

TS is defined at the surface. It is a skin temperature.

User: Harvard, GSFC Code 613.3 (Lait)

Question: Are variables with the same name that appear in multiple file collections the same?

Generally, yes. They appear in multiple collections mainly for convenience. An exception was RI, which is defined as both a 2-D and 3-D parameter, both having the same name. The updated file specification and subsequent sample data file will change the 2-D version to be RISFC. Of course, some variables with the same name

may be produced as both instantaneous and time-averaged and are inherently different in that respect.

User: Harvard

Question: Will the GEOS-5.2 data holdings continue to be available.

Yes.

User: Harvard

Question: Is the formulation of RH with respect to water and ice the same as it was in GEOS-5.2?

Yes.

User: MLS, Code 613.3 (Diehl)

Concern: Mass fluxes missing.

We are adding two new products that contain large-scale fluxes. The horizontal mass fluxes will be in `tavg3_3d_lsf_Nv` and the vertical mass flux will be in `tavg3_3d_lsf_Ne`.

User: MLS

Question: Are you assimilating any satellite aerosol or chemical data?

No. We use climatological anthropogenic inventories, state-dependent dust and sea-salt emissions and near real-time biomass emissions derived from MODIS fire radiative power retrievals. Aerosol assimilation is scheduled to go into parallel testing this summer but it is not yet available in this version. It is likely that any reprocessing will include aerosol data assimilation.

User: MLS

Question: Can PL be provided instead of DELP?

The 72-level products on model layers have DELP instead of PL. PL can be computed from DELP, but not the other way around. While we don't want to add a new 3D variable to every 72-level collection, as a convenience, we will add this to the `inst3_3d_asm_Nv` product.

User: MLS

Question: Is DTDTRAD in `tavg3_3d_tdt_Nv` just the net sum of the DTD components in `tavg3_3d_rad_Nv`?

DTDTRAD is a sum of the all-sky components ... DTDTLWR and DTDTSWR.

User: MLS, HRDLS, CERES FLASHFlux/POWER, TES

Question: Will GMAO re-process at least the EOS Aura period with this release?

The GMAO does plan to do a re-processing for at least the EOS Aura period, but the time-frame for this is yet to be determined as it depends to some extent on funding but also on computer resource availability. Our goal is to start such a reprocessing in early 2012. We will keep you apprised of our plans when they become more firm.

User: MLS

Question: Will MERRA using GEOS-5.2 continue for the foreseeable future?

Yes, we plan to run MERRA with the GEOS-5.2 system as long as it makes sense to do so. The system will not be modified to use new data types or to adapt to new hardware or compilers, which is the most likely reason we will have to shut it down.

User: TES, MLS

Question: Will parameter subsetting be available?

The GES DISC will provide parameter subsetting.

User: Code 613.3 (Diehl)

Question: Can the anvil and large-scale components of DQRLSAN, REEVAPLSAN, PFLLSAN, and PFILSAN be broken out into separate variables?

No. For most of these variables, the GEOS-5.7.2 system does not have the ability to write out the individual anvil and large-scale components.

User: CERES FLASHFlux/POWER

Comment: Some radiation parameters seem to be redundant, i.e. LWGAB and LWGNT. There are inconsistencies with the glossary.

The glossary will be synchronized with the radiation parameters available in this version of the file specification. LWGAB is the absorbed longwave radiation at the surface and LWGNT is the net longwave flux at the surface (positive downward).
 $LWGNT = LWGAB - LWGEM$.

User: CERES FLASHFlux/POWER

Question: Can organic carbon be separated into hydrophobic and hydrophilic components?

In inst3_3d_aer_Nv, we provide:

OCPHOBIC: Hydrophobic organic carbon mixing ratio

OCPHILIC: Hydrophilic organic carbon mixing ratio

User: CERES FLASHFlux/POWER

Comment: Aerosol parameters are not described in the glossary.

The aerosol assimilation group at GMAO is preparing documentation for the glossary that will be released as soon as it is ready.

Based on user feedback, the following changes are being made to the file specification. Details can be found in “File Specification for GEOS-5.7.2” , version 1.1.

- Added inst3_2d_asm_Nx
- Added sizes to Table 6-1
- Updated 5.7.1 to 5.7.2;
- Removed duplicate line in inst3_3d_aer_Nv
- Added DTRAIN to tavg3_3d_cld_Nv
- Added new products tavg3_3d_lsf_Nv (MFXC, MFYC) and tavg3_3d_lsf_Ne (MFZ);
- Variable name changes in tavg1_2d_ocn_Nx:
 - SHWTR -> HFLUXWTR
 - SHICE -> HFLUXICE
 - HLATWTR -> EFLUXWTR
 - HLATICE -> EFLUXICE
- Added DTDTRFIC to tavg3_3d_tdt_Nv.
- Added PL to inst3_3d_asm_Nv
- Changed RI to RISFC in tavg1_2d_flx_Nx